REMARKS/ARGUMENTS

In a restriction requirement, mailed May 29, 2007, the Examiner required restriction under 35 U.S.C. §§ 121 between:

Species I - a tube capable of guiding light through a fluid and sample that are liquid as well as the liquid fluid and sample (claims 2, 4, 8, 21, 24, 26, and 29); and

Species II - a tube capable of guiding light through a fluid and sample that are gaseous as well as the gaseous fluid and sample (claims 2, 24, and 29).

The Restriction Requirement is Improper

For a Restriction Requirement to be proper, the following two conditions must be satisfied:

(A) The inventions must be independent (see MPEP § 802.01, § 806.06, § 808.01) or distinct as claimed (see MPEP § 806.05 - § 806.05(j)); and

(B) There would be a ***serious burden*** on the examiner if restriction is not required (see MPEP § 803.02, § 808, and § 808.02).

No such serious burden has been demonstrated in the Office Action, and it is Applicants' position that no such serious burden exists. The Office has already searched the present claims on several occasions. Specifically, the claims were searched by the Office and rejected based on prior art in the Action mailed March 17, 2006. A second search was then conducted and additional art was identified in the Action mailed October 13, 2006. Clearly there is no serious burden on the Office as the Office has already, and repeatedly, conducted searches on the pending claims. Applicants respectfully request that this restriction be withdrawn.

Provisional Election

Applicants elect, with traverse, to prosecute the species of a liquid fluid and sample. The elected species is encompassed within each of the pending claims. The

right to pursue non-elected subject matter in one or more divisional applications is expressly reserved.

Comments

Applicants thank the Office for its careful consideration of Applicants' prior response and the arguments presented therein. Applicants would like to address a few of the points raised by the Office. Specifically, the Office has inquired as to "how the light travels through the measuring cell" and to the meaning of "guiding light".

In response, Applicants note that the light is connected to the measuring cell by a primary light connecting element (p.4, line 2). Examples of primary light connecting elements are recited (p.4, line 14); depending on which light connecting element is used, light will be connected to the core of the waveguide at a different location of the tube. A lens or a lenslet array will focus the light at the first opening of the tubing, while a Brewster angle window, a partially reflecting mirror or grating index coupler will bring light inside the tube through its wall.

The light is guided through the fluid, which is the core of the waveguide. According to the Merriam-Webster dictionary, a waveguide is*: a device (as a duct, a coaxial cable or glass fiber) designed to confine and direct the propagation of electromagnetic waves*. A light waveguide is a generic term that people skilled in the art use to refer to a structure capable of confining a light beam within a core embedded in a cladding by using the total internal reflection of this beam at the interface of said core and cladding.

Applicants respectfully submit that an ordinary tube having light delivered at its first end and detected at its second end would not make a waveguide nor would it be designated as a waveguide, since it would only passively surround a light beam that is already self confined (a laser beam, for example). If the light is not self-confined into a beam, then scattering, reflection and absorption at the tube interface would prevent propagation of the light through a given length of the tube by induced losses at the interfaces and thus preventing any quantitative measurements on said light beam. In

addition, even if the light beam is self-confined, such a tube would need to be perfectly straight and aligned to the light beam to allow the light to propagate through the tube. If the tube is bent or not well aligned, the wall of the tube would interfere with the beam and generate losses through scattering, reflection or absorption.

If the tube is designed to contain a fluid, some kind of interface (fluid connector, lid, meniscus) is likely to be in the path of the light beam, thus generating light reflection, scattering and absorption. Such a set-up would not allow for a quantitative measurement of the amount of light or of the properties of the light that travel through this tube.

Furthermore, a light beam traveling through an ordinary tube would be of limited use for the application claimed herein since the molecules of interest are immobilized on the inner wall of said tube and would therefore not interact with the laser beam. First, it would be technically difficult to adjust the size of the tube and of the laser beam precisely enough to illuminate the immobilized molecules but not the wall on which they are immobilized: this would prevent a well controlled excitation of the detection agent. Second, the light emitted from the detection agent is not directional, i.e. it would not travel along the tube but rather would be lost or absorbed in the wall and could not be detected at the end of the tube.

Therefore, tubes capable of guiding light (i.e. capable of confining and directing light) within a liquid contained therein are suitable for the detection of a target immobilized from a liquid sample to the inner wall of said tube as claimed herein. Should the Office have further questions regarding these points, Applicants would invite the Examiner to telephone the undersigned at the number provided below.

Conclusion

Applicants maintain that the restriction is improper in the present application because the examination of both liquid and gaseous samples would not appear to present an undue or, indeed, any burden on the Office. Reconsideration of the restriction requirement is earnestly solicited.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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By: _____

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